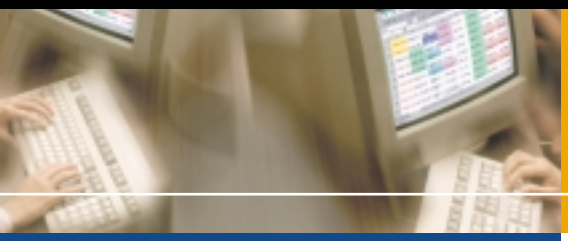
C U S T O M E R P R O F I L E

VALDOSTA STATE UNIVERSITY

Setting New Standards in Education—

Wireless Technology on Campus

ENTERASYS NETWORKS™



CUSTOMER PROFILE: VALDOSTA STATE UNIVERSITY

Industry:

Education

Challenge:

Cost-effectively expanding campus connectivity

Solution:

Enterasys RoamAbout Wireless

Benefits:

- *Expanded network connectivity meets the demands of technology savvy students—and their parents*
- *Port-per-pillow, 24 x 7 connectivity enables students to access Internet resources outside the traditional hours of the university lab setting*
- *Wireless networking is extremely cost effective, especially when compared to hard-wired alternatives*
- *RoamAbout's 802.11 standards compliance ensures seamless interoperability*
- *Patent-pending power injector saves school hundreds of dollars in installation costs*
- *New locations can be connected by RoamAbout at a fraction of the cost*
- *Increased bandwidth delivers faster data flow and enhanced performance*
- *University can take advantage of advanced technology and the latest applications*

Part of the University System of Georgia, Valdosta State University (VSU) strives to provide an educational environment that fosters special concern for individual student needs while providing the best instruction at both the undergraduate and graduate levels. Valdosta's diverse and comprehensive curriculum includes the humanities, education, nursing, sciences, business and the arts. VSU's student body of more than 8,700 represents 48 states and 50 countries; 1,800 of these students live in on-campus residence halls. Small classes at all levels are taught by 500 highly qualified faculty members, and unique cultural, business, and industry educational opportunities are available through performances, workshops, institutes, and continuing education programs.

Technologically, VSU is on the cutting edge of development. The campus has a fully operational fiber-optic data network with 28 state-of-the-art student computer labs on its main campus as well as three labs that support its educational activities 100 miles away at the Kings Bay Naval Base. All are networked to the Internet. The Odum Library, through its Galileo workstations, offers online network access to infinite source materials beyond its own 1.3 million entries. The University offers distance-learning classes at multiple sites via the statewide GSAMS network, and to the desktop via various on-line offerings such as MBA and MPA programs of study. Students are encouraged to attain technological competence and computer literacy. "Even though we're a relatively small regional university, we're very technically oriented regarding the resources we provide our students," says Paul Worth, VSU's network coordinator. "We think of our network as a utility, like water or power—something that's necessary. We try to leverage that as much as possible."

The Challenge:

Expanding Connectivity—Cost Effectively

VSU's wired network is basically a star configuration with fiber to all buildings and some ATM at the central hub. The University is moving toward an ATM backbone and plans to target the academic buildings, such as classrooms and labs, first. VSU connects to the Internet via PeachNet, the statewide Internet provider for the Georgia university system, via an OC-3 connection. Prior to the wireless installation, VSU students accessed the Internet via a 33K or 56K dial-up connection. Students either competed for a limited number of publicly accessible modems located in the University's central modem pool, or connected from their residence hall through their own ISP.

In order to be competitive with other colleges and universities—and with other student housing alternatives—Valdosta wanted to provide port-per-pillow, 24 x 7 connectivity that would enable students to access Internet resources outside the traditional hours of the university lab setting. Joe Mattachione, VSU director of housing and residential life, explains, "Simply put, students are looking at the use and availability of technology. They like to see technology integrated into the curriculum and, as a practical matter, they want convenient, affordable access—including to the Internet and e-mail."

To meet this demand, Valdosta initially considered wiring the residence halls. According to Worth, after observing many of the campuses around them go through great expense and trouble during their installations, VSU decided against the disruption and time involved with wiring each residence hall room. It also decided against the more than half million-dollar price tag that went with this type of installation. In the end, VSU looked to wireless. "We didn't immediately jump on the wireless bandwagon," Worth emphasizes. "We did look at other options because frankly, we were skeptical that wireless would fit the bill. We knew we needed a solution that would interoperate seamlessly. It also needed to be convenient to install and efficient to operate.

"Of course, cost was a major driver," Worth continues. "A wireless network is actually a more cost-effective solution than a wired network since it brings connectivity only to those rooms in which students have a computer, currently about one third of the on-campus population. The cost of installing our wireless infrastructure was less than $50,000, compared to a much higher cost for the hard-wired alternative."

The Solution:

Enterasys RoamAbout Earns High Grades

Once they had made the decision to implement a wireless network, Valdosta selected Enterasys' RoamAbout Access Point 2000 and high-rate PC card. "Our students deserve the best we can give them and easy Internet connectivity is a must today," explains Tom Archibald, assistant to the president for IT. "RoamAbout is a perfect solution. It builds on our existing technology: 800 Internet-connected PCs in 28 student labs; integrated Banner databases used by faculty, staff and students; student self-registration via the web; an integrated voice response system; informational touch-screen kiosks around the campus; 30 multimedia classrooms; 10 electronic classrooms and many other innovations."

RoamAbout integrates seamlessly thanks to its 802.11b standards compliance. "With RoamAbout's 802.11 compliance, we know it will interoperate with other compliant devices," Worth says. "I want to be able to tell students, 'If you bring an 802.11 direct sequence device, we can make sure you connect with it."

The University also liked the level of product maturity and the management interface found in RoamAbout, and they viewed its power injector—its ability to power the Access Points over Cat 5—as a big plus. "The RoamAbout power injector literally saved the university hundreds of dollars in installation costs because we didn't need to wait for electricians to put outlets everywhere," says Worth.

Official deployment of the wireless network began in the summer when a team of students installed a single Access Point and began to put it through its paces. Chris Pyle, a VSU IT employee, was in charge of the effort. "We pushed a great deal of traffic through the wireless network to see what it could take. Its performance was flawless," Pyle says.

Once this "test" was complete, the wireless network was installed in a fraction of the time that it would have required to get a hard-wired network in place. Again, Pyle spearheaded this effort. "Installation was actually pretty easy," Pyle reports. "We field tested the Access Points before installing them and found that we had much better coverage than anticipated."

Worth agreed. "Some of the buildings are 40 or 50 years old, but we've been able to make it work. In a typical two-story wing, for instance, an Access Point placed in the attic reaches both floors, making it 'invisible' to students. In a three-story wing, positioning the Access Point on the second floor enables access on all three floors."

A Popular Choice for the Student Body

So far, 200 VSU students have begun using the new wireless network, with more on the way. New students learned about the wireless network at their orientation where both IT and housing staff touted the initiative, while returning students heard about the new technology at their initial residence hall floor meeting. As Archibald explains, students can purchase PC cards on their own or at the University bookstore. "We ran into our only 'installation' issue during the first few hours of the semester," Archibald says. "Within three hours, the campus bookstore had sold out of PC cards."

Students can purchase wireless access cards for $210 at the bookstore, and the cards can be resold like textbooks at the end of the year for $150. HOPE and/or PELL financial aid funds can be used to help pay costs. Unlike using a modem for access, students with wireless access do not have to pay $15 to $20 per month to an ISP.

The campus bookstore plays another important role once the PC card is purchased because bookstore staff members have been trained to install the PC card and then configure the PC or laptop to work on the wireless network. "With the bookstore staff handling the configuration and subsequent registration of users, as well as RoamAbout's access control lists, we're able to manage the number of individuals who use the network," Worth explains. "This helps us ensure that only authorized students, faculty and staff take advantage of our wireless service." In addition to free installation and configuration, registered students benefit from free technical support.

Once their PCs or laptops have been configured, students can access an Internet service that is 200 to 300 times faster than a modem while moving throughout their residence halls—and even some distance away—while remaining connected. The wireless web also keeps students from having to tie up phone lines for Internet hook-up, which means that phone lines remain open while students surf. Up to 250 students can dial into each Access Point, so no one has to worry about getting a busy signal. "Students who initially grumbled at the cost are now looking at their wireless counterparts with envy," says Mattachione. "The ease of use and connection speed are hard to beat." So far the highest traffic has been 500 Kbytes/sec, about the equivalent of three T1 lines.

Beyond the rapid access to the Internet for "surfing" students also value the easy access to applications. According to Archibald, a number of professors take advantage of the network using list servers for particular classes. Web CT allows professors to develop their own courseware and enables students to receive and turn in their assignments via e-mail, keep and access class notes online, and even have class discussions online. "VSU is proud to be an early adopter of Web CT, which is being implemented throughout the Georgia university system," Archibald says.

VSU was also impressed with the Enterasys sales and support representatives with whom they worked. "The people at Enterasys knew their products very well," recalled Worth. "With some of the other vendors, I got different stories from different people in tech support. But the Enterasys' representatives always provided fast and knowledgeable responses."

The Future:

Moving to the Head of the Class

The response to the new wireless network at VSU has been so positive that plans are underway to expand wireless to cover public meeting areas like the library, cafeteria and building lobbies. "Our goal," says Worth, "is for students to be able to access the Internet or campus computing resources wherever they would ordinarily sit down to study."

In the long term, Worth envisions the wireless network expanding to classrooms and laboratories. "Our wired network extends to many of these areas already," he says, "but we see a real advantage in offering students the freedom to move around a classroom with a laptop, particularly in a lab setting."

Mattachione looks at the University's new wireless network as an investment in the future. "I'm convinced that one of the most effective use of our resources is to provide technology to our students. Not only does it help them to succeed while they're here; it also prepares them for their lives after VSU."

Lit# 9012303 1/01

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